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Docket Management System,  
U.S. Department of Transportation,  
Room PL 401,  
400 Seventh Street, SW.  
Washington, DC 20590

Subject: Enhanced Flight Vision Systems - Notice of Proposed  
Rulemaking (NPRM)  
Reference: Docket Number FAA-2003-14449

Dear Mr. Les Smith,

The National Air Carrier Association, on behalf of its member airlines, supports the idea of amending 14 CFR to reflect technological advances that improve safety and efficiency and to harmonize these advances with the International Civil Aviation Organization and other foreign aviation entities. In making these changes that bring the regulations into the 21<sup>st</sup> Century, we believe it is important that we establish a timeless regulatory regime that repairs existing 14 CFR Parts 91 and 121 deficiencies regarding flight visibility and navigational capability without unnecessarily restricting new and evolving technology.

However, we do not believe that this particular proposal reflects those concepts. This NPRM precedes airborne equipment certification standards. Even the terms are not defined in a manner that we believe is correct or that provides the flexibility needed for future application. Also, with the investment required for these systems, we must achieve greater operational benefits and efficiencies. This proposal specifically prohibits much needed operational improvements such as use in CAT II/III approaches. We must also be permitted to fly beyond the final approach fix under certain weather conditions that are currently prohibited in 14 CFR 121.651. Failure to recognize these operational efficiencies will delay implementation of new technologies because operators simply cannot afford the investment without a return. In turn, that will also delay safety improvements and accident reduction in areas such as CFIT, ALAR and runway incursions will be delayed. It is also very difficult to comment on this NPRM when critical, controversial amendments are simultaneously proposed in FAA-2002-14002.

Thus we recommend the proposal be withdrawn, and the rulemaking tasking be given to either the Terminal Area Operations Aviation Rulemaking Committee (TAOARC) or to the

Aviation Rulemaking Advisory Committee (ARAC). The tasking to either body should be to produce both a simplified regulatory change that has future flexibility and to produce an Advisory Circular that would contain much of the technical application and training required to operate the new technology in its safest and most efficient manner. By doing so, advances in technology, training and technique can more readily be changed in the AC than is required by a change to the code of federal regulations.

Finally, if practical, the AC and regulatory revisions recommended by the advisory committee should be harmonized with JAR OPS 1-430.

IF the NPRM is not to be withdrawn, we support changes to simplify the regulatory language, so that we could eventually accommodate CAT II/III approaches and we should change 121.651 to permit continuation of approaches to a decision at decision height.

We also recommend the EFV/SVS definitions be made more generic and that they not be limited to 14 CFR 91.175 applications. The following revised definitions are recommended:

*Enhanced flight visibility* means the average forward horizontal distance, from the cockpit of an aircraft in flight, at which prominent topographical objects may be clearly distinguished and identified by day or night by a pilot using an enhanced flight vision system.

*Enhanced flight vision system (EFVS)* means an electronic means to provide a display of the external through the use of imaging sensors, such as a forward looking infrared, millimeter wave radiometry, millimeter wave radar, low light level image intensifying.

*Synthetic vision* means a computer-generated image of the external scene derived from aircraft attitude, high-precision navigation solution, and database of terrain, obstacles and relevant cultural features.

*Synthetic vision system* means an electronic means to display a synthetic vision image of the external scene.

We also recommend immediate work on an Advisory Circular to establish airborne equipment certification standards, training, and AFM endorsements that ensure the items referenced in 91.175 are distinctly visible with the EVS. This has been the approach with much more sophisticated and complex systems such as Head Up Display, Autoland, TCAS, navigation systems and etc.

Respectfully Submitted  
National Air Carrier Association

Ronald N. Priddy  
President